Claims Amendment:

Please amend the claims as follows:

1.-9. (canceled)

10. (currently amended) A method for defining a distribution fan-out for the distribution of traffic via different paths in a packet-based communication network formed by a plurality of nodes and a plurality of connection sections for packet traffic having the same egress node, the method comprising:

defining for the communication network a node arrangement comprising a plurality of distinct node classes that encompasses all of the plurality of nodes of the communication network, wherein each respective one of the distinct node classes is distinguished from one another based on a number of hops required by each node in a given class to reach the egress node;

wherein the defining of the node arrangement comprises dividing all of the plurality of nodes into the plurality of distinct classes subject to satisfying a first condition and a second condition, wherein the first condition establishes for each node a path to the egress node which is measured in a minimum number of hops, and the second condition establishes no loop formation within each distinct class, whereby nodes with the same minimum number of hops belong to the same class,

wherein from each node of a class, a link is routed to a node of a class having one fewer hop, and

wherein for a node of a class which is connected by a connection section to a node having the same class, a link between the node and the node of the same class is defined.

11. (previously presented) The method according to Claim 10, wherein from each node of a class a link is routed along each connection section to a node of the class having one fewer hop.

12. (currently amended) A method for defining a distribution fan-out for the distribution of traffic via different paths in a packet-based communication network formed by a plurality of nodes and a plurality of connection sections for packet traffic having the same egress node, the method comprising:

defining for the communication network a node arrangement comprising a plurality of distinct node classes that encompasses all of the plurality of nodes of the communication network, wherein each respective one of the distinct node classes is distinguished from one another based on a number of hops required by each node in a given class to reach the egress node;

wherein the defining of the node arrangement comprises dividing all of the plurality of nodes into the plurality of distinct classes subject to satisfying a first condition and a second condition, wherein the first condition establishes for each node a path to the egress node which is measured in a minimum number of hops, and the second condition establishes no loop formation within each distinct class, the node classes are determined according to the minimum number of hops between the nodes and the egress node, whereby nodes with the same minimum number of hops belong to the same class; and

routing from each node of a class at least one link to a node of a class having one fewer hop

wherein from each node of a class, a link is routed to a node of a class having one fewer hop,

wherein for at least one node of a class which is connected by a connection section to a node of the same class, at least one link between the node and a node of the same class is defined,

wherein, in the case of a node which is assigned to a class and which has one outgoing link, in the event of failure of said outgoing link:

for each link to the respective node that originates from a node having the same class as the respective node, the respective link is inverted, and

when no link to the respective node originates from a node having the same class, all links to the respective node are inverted.

13. (canceled).

14. (previously presented) The method according to Claim 12, further comprising:

defining links on connection sections between nodes of a class, wherein said links being defined according to a maximization of the number of outgoing logical links for the node or nodes of the class having the least number of outgoing links, and according to loop freedom in respect of the links between nodes of the class.

15. (previously presented) The method according to Claim 13, further comprising:

defining links on connection sections between nodes of a class, wherein said links being defined according to a maximization of the number of outgoing logical links for the node or nodes of the class having the least number of outgoing links, andaccording to loop freedom in respect of the links between nodes of the class.

16. (previously presented) The method according to Claim 14, wherein

for nodes of the class, the nodes are sequenced according to the number of outgoing links and, when nodes have the same number of outgoing links, according to the capacity of the incoming links, and performing for at least some of the nodes, the following steps for each node depending on their sequence:

identifying the shortest path from the node to the set of nodes of the class which is fewer by one, paths via outgoing links leading directly to nodes of the class N-1 being disregarded, and

incorporating the link via the first connection section of the identified path into the distribution fan-out as a link, when an identified path does not lead to a loop within the nodes of the class.

17. (previously presented) The method according to Claim 15, wherein

for nodes of the class, the nodes are sequenced according to the number of outgoing links and, when nodes have the same number of outgoing links, according to the capacity of the incoming links, and performing for at least some of the nodes, the following steps for each node depending on their sequence:

identifying the shortest path from the node to the set of nodes of the class which is fewer by one, paths via outgoing links leading directly to nodes of the class N-1 being disregarded, and

incorporating the link via the first connection section of the identified path into the distribution fan-out as a link, when an identified path does not lead to a loop within the nodes of the class.

18. (previously presented) The method according to Claim 10, wherein, in the case of a node which is assigned to a class and which has at least two outgoing links, in the event of failure of one of the outgoing links, the traffic to be routed via this link is distributed onto the other outgoing link or links.

19. (previously presented) The method according to Claim 11, wherein, in the case of a node which is assigned to a class and which has at least two outgoing links, in the event of failure of one of the outgoing links, the traffic to be routed via this link is distributed onto the other outgoing link or links.

20. (previously presented) The method according to Claim 12, wherein, in the case of a node which is assigned to a class and which has at least two outgoing links, in the event of failure of one of the outgoing links, the traffic to be routed via this link is distributed onto the other outgoing link or links.

21. (previously presented) The method according to Claim 13, wherein, in the case of a node which is assigned to a class and which has at least two outgoing links, in the event of failure of one of the outgoing links, the traffic to be routed via this link is distributed onto the other outgoing link or links.

22. (previously presented) The method according to Claim 14, wherein, in the case of a node which is assigned to a class and which has at least two outgoing links, in the event of failure of one of the outgoing links, the traffic to be routed via this link is distributed onto the other outgoing link or links.

23. (previously presented) The method according to Claim 16, wherein, in the case of a node which is assigned to a class and which has at least two outgoing links, in the event of failure of one of the outgoing links, the traffic to be routed via this link is distributed onto the other outgoing link or links.

24. (canceled)

25. (previously presented) The method according to Claim 11, wherein, in the case of a node which is assigned to a class and which has one outgoing link, in the event of failure of said outgoing link:

for each link to the respective node that originates from a node having the same class as the respective node, the respective link is inverted, and

when no link to the respective node originates from a node having the same class, all links to the respective node are inverted.

26. (canceled)

27. (previously presented) The method according to Claim 10, wherein in the event of failure of an outgoing link of a node assigned to a class, the class of the node is redefined when the duration of the failure exceeds a limit value.

28. (previously presented) The method according to Claim 11, wherein in the event of failure of an outgoing link of a node assigned to a class, the class of the node is redefined when the duration of the failure exceeds a limit value.

29. (previously presented) The method according to Claim 12, wherein in the event of failure of an outgoing link of a node assigned to a class, the class of the node is redefined when the duration of the failure exceeds a limit value.